

Abstract

The present invention provides a method to encode AV/C command and response data packets for extension data fields. The AV/C command and response data packets are used for asynchronous data block transactions between devices over an IEEE 1394-1995 serial bus network. Extension data fields are used that hold extension data that support new or added features of an IEEE 1394-1995 serial bus network and devices operating therein. The AV/C data packets are encoded for the extension data fields by providing extended fields data within data fields of the Function Control Protocol (FCP) data frames. The extended fields data specifies whether or not the packet includes extension data fields, and if so, how many bytes of extension data may be included within the data field. Preferably, the extended fields data is provided early within the data sequence of the FCP data frame such that a receiving device reads the extended fields data in an AV/C command data packet and based on device compatibilities for processing extension data, the receiving device will either ignore the feature data, respond with an error message or respond with a modified data packet format which provides a signature for the mutually supported features. Extension data supports device and system features such as transaction labels, that identify the source of the data packet after it is received, and error/result messages, that are used to notify a user or a networked device that a transaction has failed or was successful. Transaction data is also used to determine the number of other extension data fields to be used during AV/C data transacted between devices and provides for the ability to establish communication protocols based on the mutually supported features of the communicating devices.